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Horsemanship and Horse Care

U.S. DEPT. OF AGRICULTURE
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This bulletin supersedes Farmers' Bulletin No. 2127, "Light Horses." For more complete information on horses, see Agriculture Handbook No. 394, "Breeding and Raising Horses."

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Horsemanship and Horse Care

By M. E. ENSMINGER, collaborator,
Animal Science Research Division, Agricultural Research Service

Horses may be classified as light horses, ponies, or draft horses, according to size, build, and use.

Light horses are 14-2 to 17 hands high measured at the withers, and they weigh 900 to 1,400 pounds. A hand is 4 inches; thus 14-2 hands is 58 inches, or 14 hands, 2 inches.

Ponies are under 14-2 hands high and weigh up to 900 pounds.

Draft horses are 14-2 to 17-2 hands high, weigh 1,400 pounds or more, and are used primarily for pulling loads and other heavy work.

Light horses are discussed in this bulletin. They are used primarily for riding, driving, racing, or light farm work and in addition to being smaller they are generally more rangy and more active than draft horses.

BREEDS OF HORSES

A breed of horses is a group of horses having a common origin and possessing certain well-fixed,

distinctive, uniformly transmitted characteristics that are not common to other horses.

The U. S. Department of Agriculture has no authority to approve a breed. The only legal basis for recognizing a breed is in the Tariff Act of 1930. It provides for the duty-free admission of purebred breeding horses provided they are disease free and registered in the country of origin, but this applies only to imported animals.

For detailed information about any of the breeds, write to the appropriate breed registry association. The names and addresses of the associations are given on pages 48 and 49.

The list of associations is not complete, and no discrimination is intended against associations that are not included. Only the associations that register the most common breeds of horses are listed. But the inclusion of an association in the list does not constitute any official recognition of the horses it registers as a breed.



BN-32565

Breed: American Albino Horse.
Color: White.



BN-32892

Breed: American Paint Horse.
Color: White and any other color.



BN-32575

Breed: American Buckskin.
Color: Buckskin, red dun, or grulla (mouse dun).



BN-32564

Breed: American Saddle Horse.
Color: Bay, brown, gray, chestnut, or black.



BN-32559

Breed: American Gotland Horse.
Color: Bay, brown, black, dun, chestnut, roan, or palomino.



BN-32568

Breed: Appaloosa.
Color: White over the loin and hips with dark spots on the white areas; other coloring is variable.



BN-32557

Breed: Arabian.

Color: Bay, gray, chestnut, white, or black.



BN-32567

Breed: Galiceno.

Color: Bay, black, chestnut, dun, gray, brown, or palomino.



BN-32576

Breed: Cleveland Bay.

Color: Bay body and black legs.



BN-32825

Breed: Hackney.

Color: Chestnut, bay, brown, roan, or black.



BN-32569

Breed: Connemara Pony.

Color: Gray, black, bay, dun, brown, cream, roan, or chestnut.



BN-32572

Breed: Hungarian Horse.

Color: Any color.



BN-32579

Breed: Missouri Fox Trotting Horse
Color: Any color but usually sorrel.



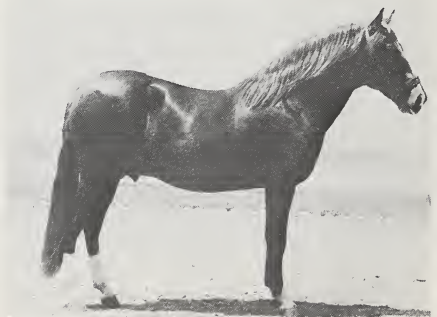
BN-32566

Breed: Paso Fino.
Color: Any color.



BN-32578

Breed: Morgan.
Color: Bay, brown, black, or chestnut.



BN-32574

Breed: Peruvian Paso.
Color: Any color.



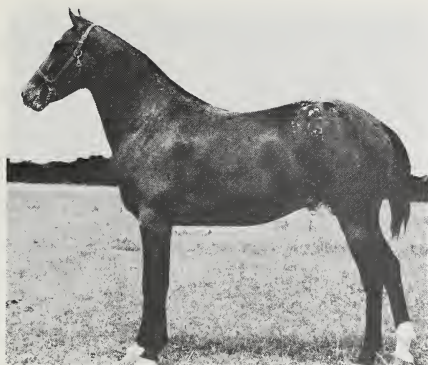
BN-32577

Breed: Palomino.
Color: Golden with light colored mane and tail.



BN-32555

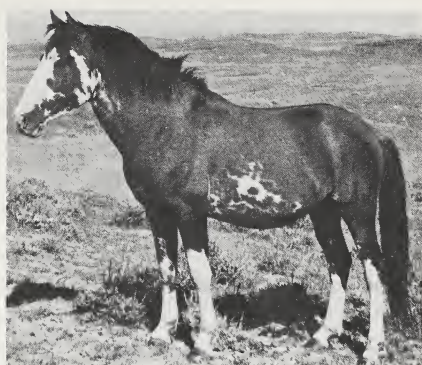
Breed: Pinto Horse.
Color: White and any other color.



BN-32894

Breed: Pony of the Americas.

Color: White over the loin and hips with dark spots on the white areas; other coloring is variable.



BN-32556

Breed: Spanish Mustang.

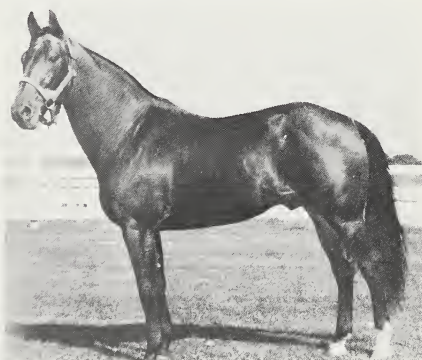
Color: Any color except tobiano.



BN-32573

Breed: Quarter Horse.

Color: Chestnut, sorrel, bay, dun, black, palomino, roan, brown, or copper.



BN-32571

Breed: Standardbred.

Color: Bay, brown, chestnut, black, gray, roan, or dun.



BN-32826

Breed: Shetland Pony.

Color: Any color.



BN-32893

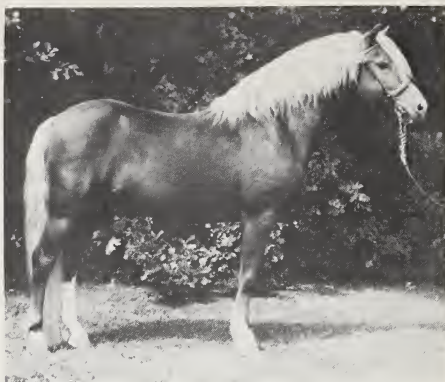
Breed: Tennessee Walking Horse.

Color: Sorrel, chestnut, black, roan, white, bay, brown, gray, or golden.



BN-32560

Breed: Thoroughbred.
Color: Bay, brown, black, chesnut, roan, or gray.



BN-32563

Breed: Welsh Pony.
Color: Any color except piebald or skewbald.

SELECTING A HORSE

Relatively few horses are inspected and evaluated by experienced horsemen. Most horses are bought by persons who lack experience in judging but who have a practical need for the animal and take pride in selecting and owning a good horse. If you are an amateur, you should get the help of a competent horseman before you buy a horse.

When you select a horse, consider the following points.

- The horse should be the right size and weight for the rider. A small child should have a small horse or pony and a heavy adult should have a large horse. Also, a tall person should have a tall horse.

- A quiet, gentle horse that is not too spirited is best for an inexperienced adult or a child.

- A three-gaited horse usually is best for a beginner. A beginner needs experience riding a horse

in the three natural gaits—walk, trot, and gallop—before he attempts to ride a horse executing more complicated gaits.

After deciding what kind of horse you need, you are ready to select a particular horse. The best method is to select your horse on the basis of body characteristics and performance, and on show ring winnings if he is a show horse. If you intend to use your horse for breeding, you also should consider his pedigree and the records of his near relatives and offspring.

Before you go out to buy a horse, you should be able to identify the parts of a horse, detect blemishes and unsoundnesses and determine age.

Parts of a Horse

You should have a thorough knowledge of the parts of a horse and be able to understand the language commonly used in de-

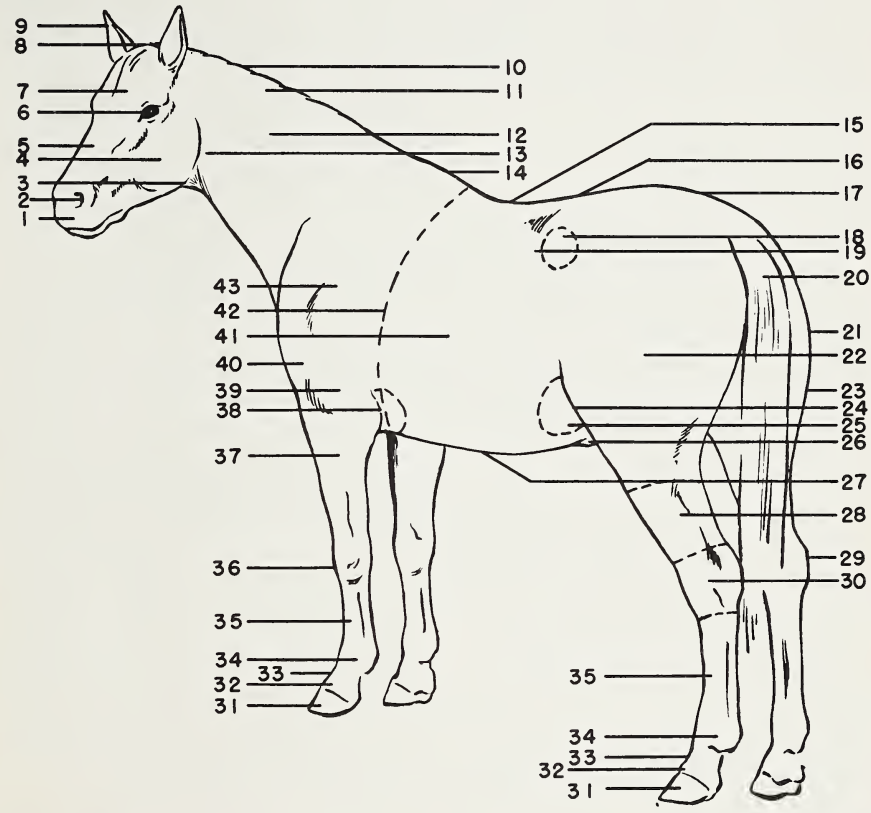
scribing them. The diagram on this page shows the parts of a horse.

The use of a score card is a good way to make sure that you have inspected all parts of a horse before you buy him. A score card lists all the parts and assigns a

proper value to each part. An all-breed score card is shown on pages 8 and 9.

Blemishes and Unsoundnesses

An integral part of selecting a horse lies in your ability to rec-



Parts of a horse.

BN-15178

- | | | | |
|-------------|-----------------------|-------------------|-----------------------|
| 1. Muzzle | 12. Neck | 23. Quarter | 34. Fetlock |
| 2. Nostril | 13. Throatlatch | 24. Stifle | 35. Cannon |
| 3. Jaw | 14. Withers | 25. Rear flank | 36. Knee |
| 4. Cheek | 15. Back | 26. Sheath | 37. Forearm |
| 5. Face | 16. Loin | 27. Underline | 38. Point of elbow |
| 6. Eye | 17. Croup | 28. Gaskin | 39. Arm |
| 7. Forehead | 18. Hip | 29. Point of hock | 40. Point of shoulder |
| 8. Poll | 19. Coupling | 30. Hock | 41. Ribs |
| 9. Ear | 20. Tail | 31. Foot | 42. Heart girth |
| 10. Mane | 21. Point of buttocks | 32. Coronet | 43. Shoulder |
| 11. Crest | 22. Thigh | 33. Pastern | |

All-Breed Horse Score Card

Characteristics	Points or percent	Name or number of horse:	Name or number of horse:	Name or number of horse:	Name or number of horse:
Breed type ----- Animals should possess the distinctive characteristics of the breed represented, including— <i>Color:</i> <i>Height at maturity:</i> <i>Weight at maturity:</i>	15				
Form ----- <i>Style and beauty:</i> Attractive, good carriage, alert, refined, symmetrical, and all parts nicely blended together. <i>Body:</i> Nicely turned; long, well-sprung ribs; heavily muscled. <i>Back and loin:</i> Short and strong, wide, well muscled, and short coupled. <i>Croup:</i> Long, level, wide, muscular, with a high-set tail. <i>Rear quarters:</i> Deep and muscular. <i>Gaskin:</i> Heavily muscled. <i>Withers:</i> Prominent, and of the same height as the high point of the croup. <i>Shoulders:</i> Deep, well laid in, and sloping about a 45-degree angle. <i>Chest:</i> Fairly wide, deep, and full. <i>Arm and forearm:</i> Well muscled.	35				
Feet and legs ----- <i>Legs:</i> Correct position and set when viewed from front, side, and rear. <i>Pasterns:</i> Long, and sloping at about a 45-degree angle. <i>Feet:</i> In proportion to size of horse, good shape, wide and deep at heels, dense texture of hoof. <i>Hocks:</i> Deep, clean-cut, and well supported. <i>Knees:</i> Broad, tapered gradually into cannon. <i>Cannons:</i> Clean, flat, with tendons well defined.	15				

All-Breed Horse Score Card—(Continued)

Characteristics—Continued	Points or percent	Name or number of horse:	Name or number of horse:	Name or number of horse:	Name or number of horse:
Head and neck.....	10				
Alertly carried, showing style and character.					
<i>Head:</i> Well proportioned to rest of body, refined, clean-cut, with chiseled appearance; broad, full forehead with great width between the eyes; ears medium sized, well carried, and attractive; eyes large and prominent.					
<i>Neck:</i> Long, nicely arched, clean-cut about the throatlatch, with head well set-on, gracefully carried.					
Quality	10				
Clean, flat bone; well-defined and clean joints and tendons, and fine skin and hair.					
Action	15				
<i>Walk:</i> Easy, springy, prompt, balanced, a long step, with each foot carried forward in a straight line; feet lifted clear of the ground.					
<i>Trot:</i> Prompt, straight, elastic, balanced, with hocks carried closely, and high flexion of knees and hocks.					
Discrimination: Any abnormality that affects the serviceability of the horse.....					
Disqualification: In keeping with breed registry or show regulations.....					
Total points or percent.....	100				

ognize common blemishes and unsoundnesses and your ability to rate the importance of each.

A thorough knowledge of sound body and limb structure makes it easy to recognize imperfections.

Any abnormal deviation in the

structure or function of a horse constitutes an unsoundness. From a practical standpoint, however, you should distinguish between abnormalities that do and those that do not affect serviceability.

Blemishes include abnormali-

ties that do not affect serviceability, such as scars from wire cuts or rope burns.

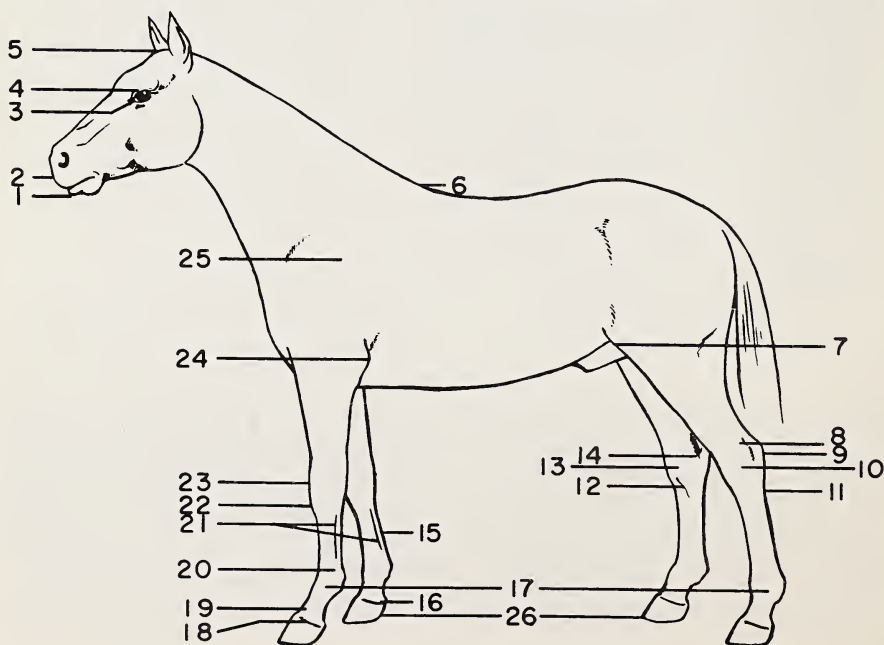
Unsoundnesses include more serious abnormalities that affect serviceability, such as splints, ringbone, or founder.

Consider the use to which you intend to put the animal before you buy a blemished or unsound horse.

The locations of common blemishes and unsoundnesses are shown in the diagram on this page. Definitions of the names of the blemishes and unsoundnesses follow.

The number preceding each blemish or unsoundness defined in the following list corresponds to the same number shown in the diagram.

1. **UNDERSHOT JAW.**—Lower jaw is longer than the upper jaw, causing malocclusion of the teeth.
2. **PARROT MOUTH.**—Lower jaw is shorter than upper jaw (overshot jaw).
3. **BLINDNESS.**—Partial or complete loss of vision.
4. **MOON BLINDNESS.**—A cloudy or inflamed condition of the eye that recurs at periodic intervals (periodic opthalmia).
5. **POLL EVIL.**—An inflamed or infected condition in the region of the poll, usually caused by bruising.
6. **FISTULOUS WITHERS.**—An inflamed or infected condition in the region of the withers caused by a bruise or ill fitting harness.



Location of points of common unsoundnesses in horses.

BN-15177

7. STIFLED.—The patella (cap) of the stifle joint has been displaced.
8. THOROUGHPIN.—A puffy condition in the web (tissue) of the hock.
9. CAPPED HOCK.—An enlargement at the point of the hock.
10. STRINGHALT.—An excessive flexing upward of the hind legs when moving forward or backward.
11. CURB.—Swelling at the rear of the leg and just below the point of the hock.
12. BONE SPAVIN or JACK.—A bony enlargement on the inside of the hock at a point where the hock tapers into the cannon bone.
13. BOG SPAVIN.—A filling of the natural depression on the inside and front of the hock.
14. BLOOD SPAVIN.—A varicose vein that appears on the inside of the hock just above the location of a bog spavin.
15. BOWED TENDONS.—Swollen tendons behind the cannon bones in both the front and hind legs.
16. SIDEBONES.—Hardened lateral cartilage immediately above and toward the rear quarter of the coronet.
17. COCKED ANKLES.—Fetlocks bent forward in a cocked position, usually the hind ones.
18. QUITTOR.—A deep-seated running sore at the coronet.
19. RINGBONE.—A bony growth on the pastern bone, generally on the front foot.
20. WIND PUFF.—An enlargement of the fluid sac, or bursa, just above the pastern on the fore and rear legs.
21. SPLINTS.—Bony growths on the cannon bone, usually on the inside of the front legs.
22. KNEE-SPRUNG.—The knees are bent forward, also called buck kneed.
23. CALF-KNEED.—Knees tend to bend backward, opposite of buck kneed.
24. CAPPED ELBOW or SHOE BOIL.—Swelling at the point of the elbow.
25. SWEENEY.—A depression in the shoulder because of an atrophied muscle.
26. FOOT AILMENTS
Contracted heel.—A drawing in or contracting of the heel.
Corns.—A bruise in the soft tissue underlying the horny sole of the foot.
Founder.—A serious inflammation of the fleshy laminae under the horny wall of the hoof.
Thrush.—A disease of the frog (bottom middle) of the hoof.
Splayfoot.—Front toes turned out, heels turned in.
Pigeon toed.—Front toes turned in, heels turned out.
Quarter or sand crack.—A vertical split in the horny wall of the hoof.
Scratches or grease heel.—A scabby inflammation of the posteria surface of the fetlocks.

Some general ailments that effect horses are defined as follows:
Heaves.—Difficulty in forcing air out of the lungs.

Hernia.—The protrusion of any internal organ through the wall that contains it.

Roaring.—Whistling or wheezing when breathing is speeded up.

Thick wind.—Difficulty in breathing.

Determining Age

Horses can live about 20 to 25 years. They generally are at their best between 3 and 12 years of age. This may vary because of individual differences in animals or because of differences in the kind of work they do.

The age of horses is, therefore, important to breeder, seller, and buyer.

You can determine the approximate age of a horse by noting the time of appearance, shape, and degree of wear of temporary and permanent teeth. Temporary, or milk, teeth are smaller and whiter than permanent teeth.

The best way to learn to determine age in horses is by examining the teeth of individual horses of known ages. You can use the diagrams on pages 13 and 14 as guides to determine the age of horses by their teeth.

After a horse reaches 12 years of age, the teeth change from oval to triangular and they project or slant forward more as the horse gets older, as shown on page 15.

A horse's environment can affect wear on the teeth. The teeth of horses raised in dry, sandy areas, for example, will show more than normal wear; a 5-year-old western horse may have teeth that would be normal in a 6- to 8-year-

old horse raised elsewhere. Cribbing (gnawing wood) also will make the teeth show more than normal wear. It is hard to determine the age of cribbers or horses with undershot jaw or parrot mouth.

A mature male horse has 40 teeth, a mature female has 36, and a foal of either sex has 24.

Quite commonly, a small pointed tooth, known as a "wolf tooth," may appear in front of each first molar in the upper jaw, thus increasing the total number of teeth to 42 in the male and 38 in the female. Less frequently, two more wolf teeth in the lower jaw increase the total number of teeth in the male and female to 44 and 40, respectively.

COLORS AND MARKINGS

Within some of the breeds, certain colors are preferred and in some cases certain colors are required for registration; other colors are undesirable or even disqualify animals for registration. You need a working knowledge of body colors and head and leg markings to know what colors are required of the different breeds and to identify individual horses.

Body Colors

The five basic body colors of horses are described as follows:

Bay.—Bay is a mixture of red and yellow. It includes many shades from yellowish tan (light bay) to a dark shade that is almost brown (dark bay). Bay horses usually have a black mane and tail and black legs.



Temporary incisors to 10 days of age: First or central upper and lower temporary incisors appear.



Temporary incisors at 4 to 6 weeks of age: Second or intermediate upper and lower temporary incisors appear.



Temporary incisors at 6 to 10 months: Third or corner upper and lower temporary incisors appear.



Temporary incisors at 1 year: Crowns of central temporary incisors show wear.



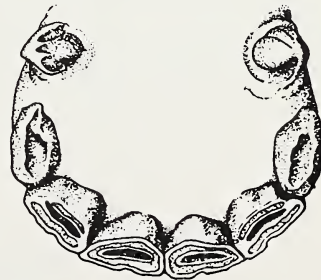
Temporary incisors at 1½ years: Intermediate temporary incisors show wear.



Temporary incisors at 2 years: All show wear.

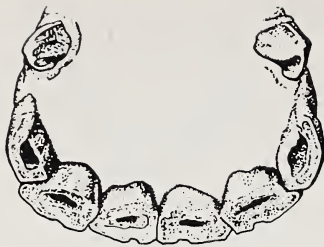


Incisors at 4 years: Permanent incisors replace temporary centrals and intermediates; temporary corner incisors remain.



Incisors at 5 years: All permanent; cups in all incisors.

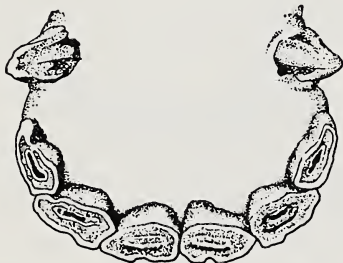
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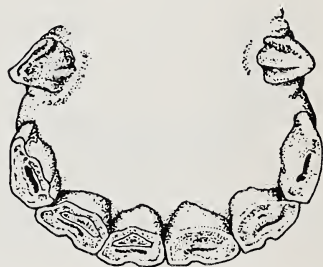
Incisors at 6 years: Cups worn out of lower central incisors.



Incisors at 7 years: Cups worn out of lower intermediate incisors.



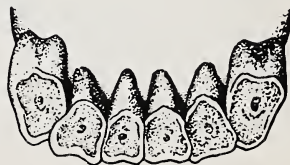
Incisors at 8 years: Cups worn out of all lower incisors, and dental star (dark line in front of cup) appears on lower central and intermediate pairs.



Incisors at 9 years: Cups worn out of upper central incisors; dental star on upper central and intermediate pairs.



Incisors at 10 years: Cups worn out of upper intermediate incisors, and dental star is present in all incisors.

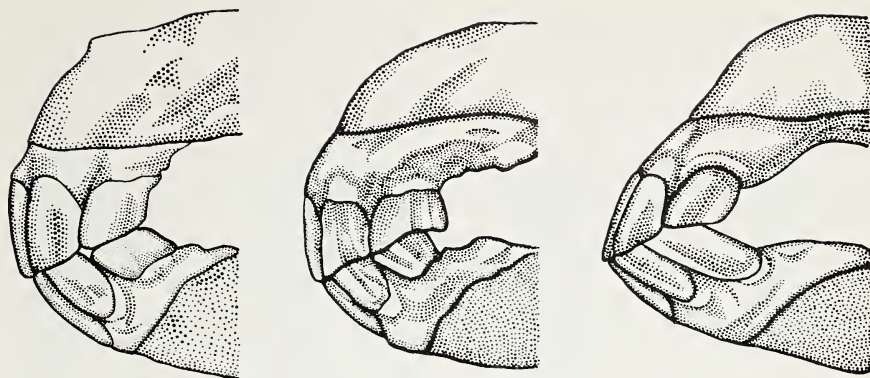


Incisors at 11 or 12 years: Cups worn in all incisors (smooth mouthed), and dental star approaches center of cups.



Characteristic shape of lower incisors at 18 years.

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BN-5969

Side view of 5-, 7-, and 20-year-old mouth. Note that as the horse advances in age, the teeth change from nearly perpendicular to slanting sharply toward the front.

Black.—A black horse is completely black. If you are in doubt between dark brown and black, inspect the color of the fine hairs on the muzzle and flanks; tan or brown hairs at these points mean the horse is not a true black, but a seal brown.

Brown.—A brown horse is almost black but he can be distinguished by the fine tan or brown hairs on the muzzle or flanks.

Chestnut (sorrel).—A chestnut horse is basically red. The shades range from light yellow (light chestnut) to a dark liver color (dark chestnut). Between these extremes are the brilliant red gold and copper shades. Normally, the mane and tail of a chestnut horse are the same shade as the body; if they are a lighter color, they are known as a flaxen mane and tail. Chestnut horses never have a black mane and tail.

White.—A true-white horse is born white and remains white throughout life. White horses have snow-white hair, pink skin, and usually brown eyes—rarely blue.

Besides the five basic horse colors, there are five major color variations. These are described as follows:

Dun (buckskin).—Dun is a yellowish color of variable shading from pale yellow to a dirty canvas color. A dun horse has a dark stripe down the back.

Gray.—Gray is a mixture of white and black hairs. Sometimes gray is hard to distinguish from black at birth, but gray horses get lighter as they grow older.

Palomino.—Palomino horses are a golden color. They have a light colored mane and tail that may be white, silver, or ivory.

Pinto (calico or paint).—Pinto is a Spanish word that means painted. Pinto horses have irregular colored and white areas on the body known as piebald or skewbald. Piebald is black and white, and skewbald is white and any other color except black.

Roan.—Roan is a mixture of white hairs and hairs of some other color. White mixed with bay is red roan; white with chestnut

is strawberry roan; and white with black is blue roan.

Head Markings

Normally, head markings are used with body colors to identify horses. For example, a horse might be described as the dark sorrel with the blaze face. The head markings of horses are shown in the diagram on this page.

Leg Markings

Leg markings are often used along with head markings to describe horses. The most common

leg markings are shown in the diagram on page 17. To identify the parts of the leg, see the diagram on page 7, which shows the parts of a horse.

RIDING EQUIPMENT

Each horse should have his own bridle, halter, and saddle that are adjusted to fit. These and other items of equipment for horses are called "tack." You should buy good quality tack because it fits and looks better and lasts longer than cheaper equipment.

When properly cared for, riding equipment will last for years.



Star



Stripe



Blaze



Star, stripe,
and snip



Snip



Bald



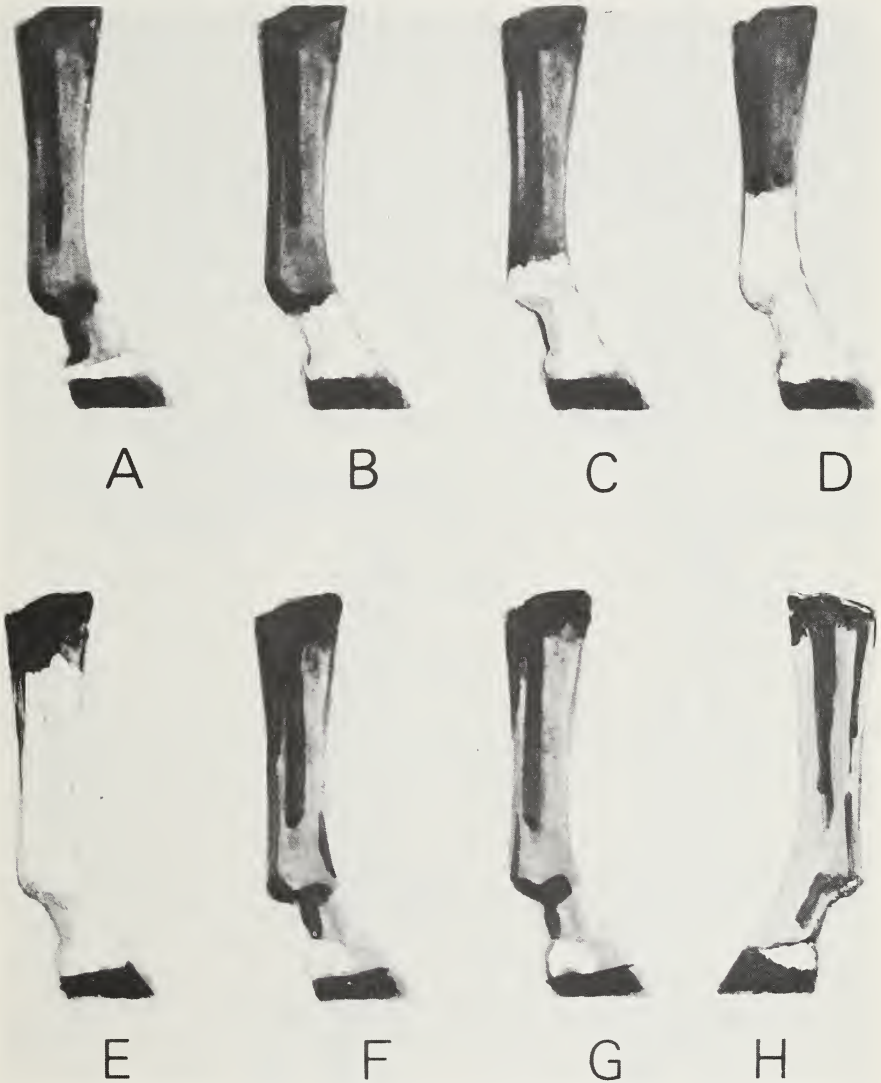
Star and stripe

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The head marks of horses: Star is any white mark on the forehead located above a line running from eye to eye; stripe is a narrow white marking that extends from about the line of the eyes to the nostrils; blaze is a broad, white marking covering almost all the forehead but not including the eyes or nostrils; star, stripe, and snip includes all three of these marks; snip is a white mark between the nostrils or on the lips; bald is a white, or bald, face including the eyes and nostrils or a partially white face; star and stripe includes both a star and stripe.

You should clean it every time you use it if you have time. If not, you should clean certain parts after each use and all of it once a week.

After each use, clean the underside of the saddle, the inside of the bridle, the bit, and the pad or blanket if you use one.



BN-37811

The leg marks of horses: (A) Coronet, a white strip covering the coronet band; (B) Pastern, white extends from the coronet to and including the pastern; (C) Ankle, white extends from the coronet to and including the fetlock; (D) Half stocking, white extends from the coronet to the middle of the cannon; (E) Stocking, white extends from the coronet to the knee and when the white includes the knee the mark is called a full stocking; (F) White heels, both heels are white; (G) White outside heel, outside heel only is white; (H) White inside heel, inside heel only is white.

Proper cleaning will—

- Extend the life of the leather and metal.
- Keep the leather soft and pliable.
- Lessen the likelihood of saddle and harness sores and other infections.
- Assure that defects in equipment are noticed so they can be repaired before they cause injury to the rider or the horse.

Bridles, Bits, and Hackamores

Bridles are either single or double. A single bridle has one bit, but a double bridle ordinarily has both a snaffle and a curb bit, two

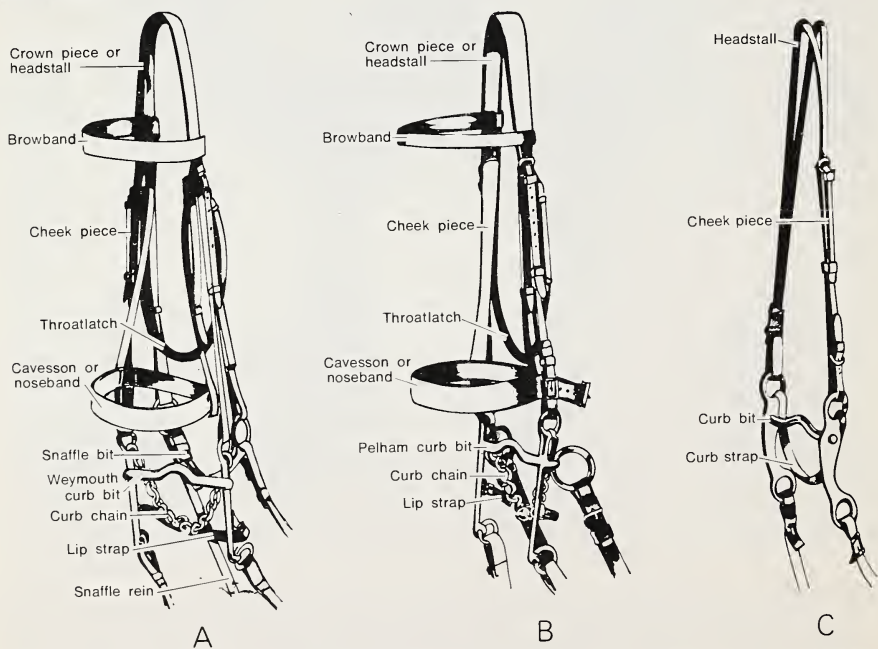
headstalls, and two pairs of reins. Only one rein is used on western bridles. A hackamore is a halter, similar to a bridle, but it has no bit. Commonly used bridles, bits, and hackamores are shown in the diagrams on pages 18 to 21.

Saddles

English and western saddles are the two most common types, with many different styles of each. The two types of saddles are shown in the diagrams on pages 21 and 22.

The English saddle is light weight and has a flat seat. It can be modified for use in pleasure

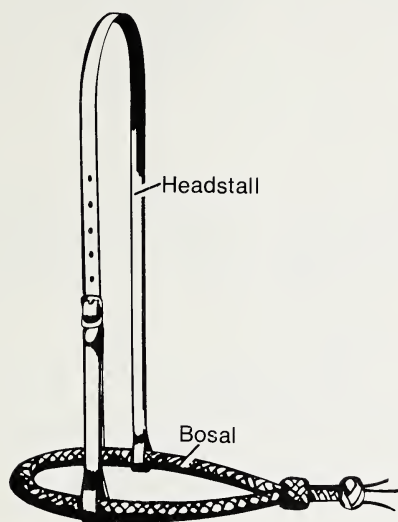
BRIDLES



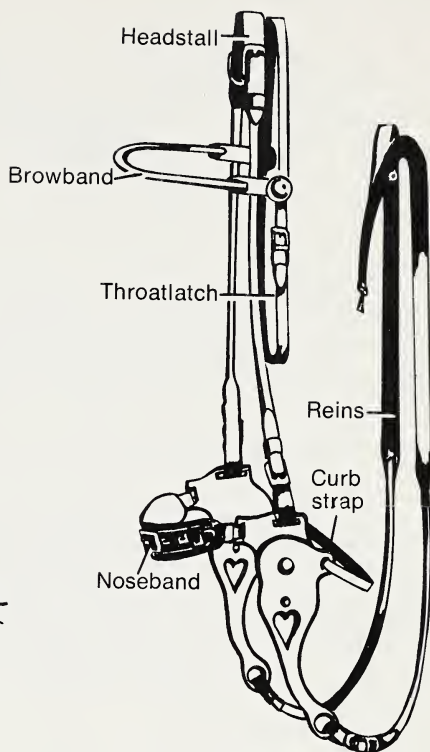
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Three types of bridles. (A) Weymouth bridle: a double-bitted, double-reined bridle used in showing three- and five-gaited horses; (B) Pelham bridle: a single-bitted, double-reined bridle used on hunters, polo ponies, and pleasure horses; (C) One ear, or split ear, bridle: a bridle often used on working stock horses.

HACKAMORES



A



B

BN-37789

Two types of hackamores. (A) Bosal hackamore: a popular hackamore for breaking horses; (B) Hackamore bit bridle: a hackamore with a removable mouthpiece that is used on western cow ponies and on young horses when they are being broken because it eliminates the possibility of injuring the mouth.

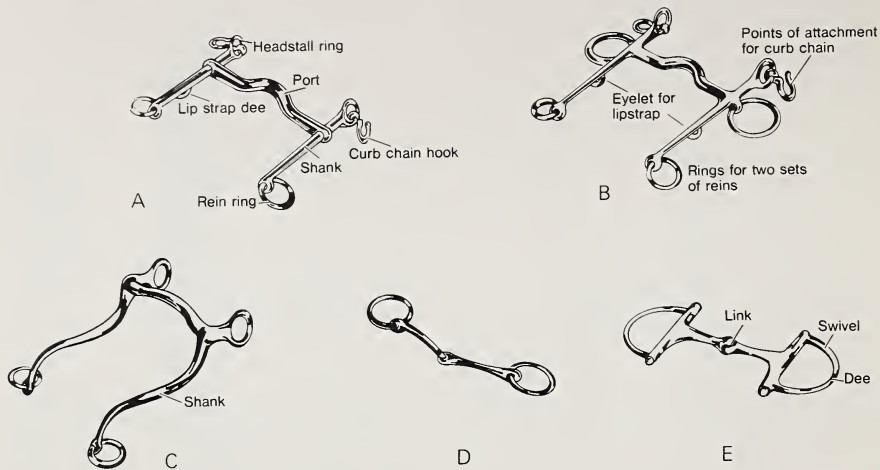
riding, training, racing, jumping, or polo. A saddle blanket usually is not necessary with an English saddle.

The western saddle is the one commonly used by cowboys and western stockmen. It is very popular among amateur horsemen. A western saddle provides comfort for all-day riding and enough strength to stand up under the strain of calf roping. The average western saddle weighs 35 to 40 pounds.

Riding Clothes

In general, riding clothes seldom change in style and are made for comfort and long wear. Peg-top breeches, for example, are designed to give plenty of seat room. Close fitting legs prevent wrinkles that might cause chafing. The chamois leather lining inside the knees and calves prevents the stirrup leathers from pinching the legs and increases the firmness of the leg grip on the horse.

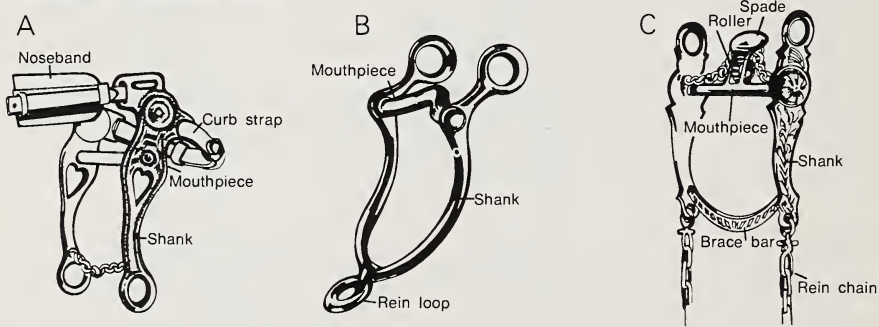
ENGLISH RIDING BITS



BN-37793

Five common types of English riding bits. (A) Weymouth curb bit: a bit used along with a snaffle bit in a Weymouth bridle for three- and five-gaited horses; (B) Pelham curb bit: a bit used in a Pelham bridle for hunters, polo ponies, and pleasure horses; (C) Walking horse bit: a bit often used on Walking Horses; (D) Snaffle bit: the most widely used of all bits; (E) Dee race bit: a bit often used on Thoroughbred race-horses.

WESTERN RIDING BITS



BN-37790

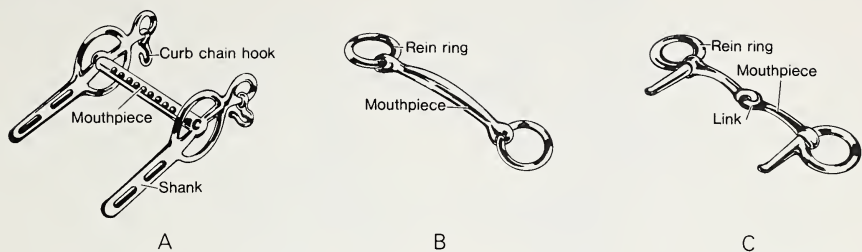
Three common types of western riding bits. (A) Hackamore bit: a bit used on most cow ponies; (B) Roper curved cheek bit: a bit used on many roping horses; (C) Spade mouth bit: a bit used on many stock horses.

Boots or jodhpurs protect the ankles from the stirrup irons. And high boots keep the breeches from snaring on objects along the trail, shield the trouser legs from the saddle straps and the horse's sides,

and protect the legs from rain and cold.

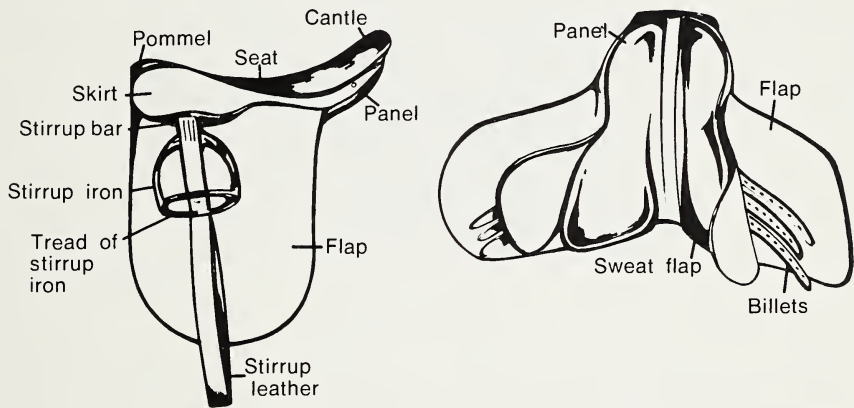
Different kinds of activities, such as showing, hunting, or polo, call for different kinds of riding clothes. Before you enter an or-

DRIVING BITS



BN-37788

Three common types of driving bits. (A) Liverpool bit: a curb bit used on heavy harness horses; (B) Bar bit: a bit used on trotting harness horses that carry check reins and are driven with a strong hand; (C) Half-cheek snaffle bit: a bit used on harness race horses, roadsters, and fine harness horses.



BN-37801

An English saddle: Left, upright position, and right, the underside.

ganized activity, you should find out if special clothes are required. An experienced participant in the activity can advise you on proper clothing for the occasion.

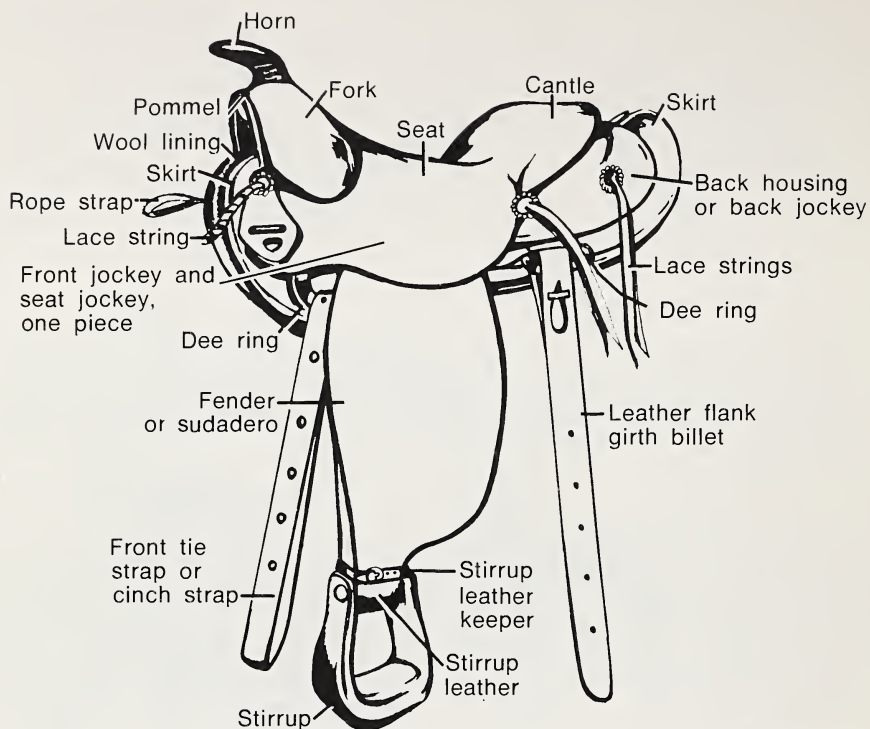
RIDING A HORSE

Before mounting always check the cinch or saddle girth for tightness and the stirrup straps or leathers for length. Mount from the left, or “near,” side. The proper way to mount English style and western style is shown in the diagrams on page 23.

The correct riding seat, or posture, for you to use for various kinds of riding is shown in the diagram on pages 24 and 25. The gaits of horses are shown on page 26.

SHOWING A HORSE

To be successful in showing horses, you must learn the rules of the class and the correct showing techniques. The two major kinds of classes are performance and halter, or breeding, classes. In performance classes, the horses demonstrate one or more



A western saddle.

BN-37802

skills, such as executing the various gaits. There are too many kinds of performance classes to be discussed here. For details on how to show your horse in a performance class, see the rule book of the American Horse Shows Association and the rules printed in the programs of local horse shows.

In halter classes, the horses are judged on their conformation and breed characteristics.

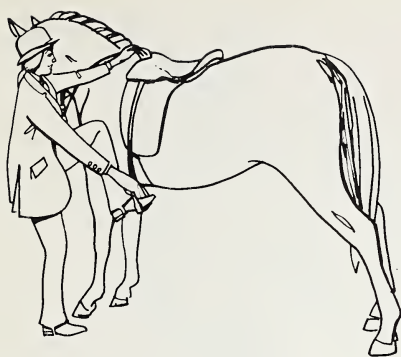
Halter classes are shown "in hand," which means the horse wears a halter or bridle and is led before the judge by an exhibitor, usually the owner or trainer.

The halter or bridle should be clean, properly adjusted, and fit-

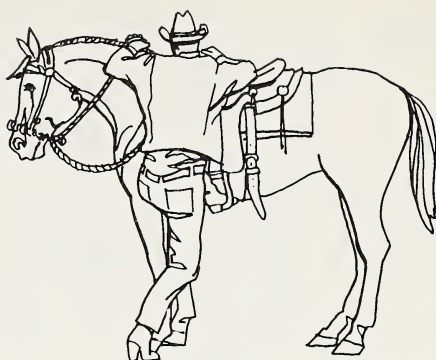
ted with a clean leather or rope lead.

Some of the principles you can use to guide you when showing a horse in the halter classes are discussed as follows:

- Groom your horse thoroughly before the show.
- Enter the show-ring promptly and in tandem when your class is called. Line up at the proper location or continue to move around the ring in tandem, as directed by the judge.
- When you line up, stand your horse squarely on all four feet with the front feet on higher ground than the hind feet if possible. Stand your horse in the pose approved for the breed. For ex-



A



B

BN-37795

How to mount a horse. (A) In English riding, take the reins in the left hand and place the left hand on the withers. Grasp the stirrup leather with the right hand and insert the left foot in the stirrup. Swing around to face the horse, hop off the right foot, grasp the cantle with the right hand, and spring upward and over. Settle into the saddle and slip the right foot into the off stirrup without looking down. (B) In western riding, take the reins in the left hand and place the left hand on the horse's neck in front of the withers. Keep the romal or end of the reins on the near side. Grasp the stirrup with the right hand, place the left foot in the stirrup with the ball of the foot resting securely on the tread. Brace the left knee against the horse, grasp the saddle horn with the right hand, and spring upward and over. Settle into the saddle and slip the right foot into the off stirrup.

ample, Arabians do not stand in a stretched pose, but American Saddlebreds stand with their front legs straight under them and their hind legs stretched out back of them. Other breeds usually stand in a slightly stretched position somewhat between these two extremes.

- When your turn comes to move your horse, show him at the walk first and then at the trot. To move your horse, hold the upper part of the lead strap or rope in your right hand and the folded or coiled end in your left hand and lead him from his left side.

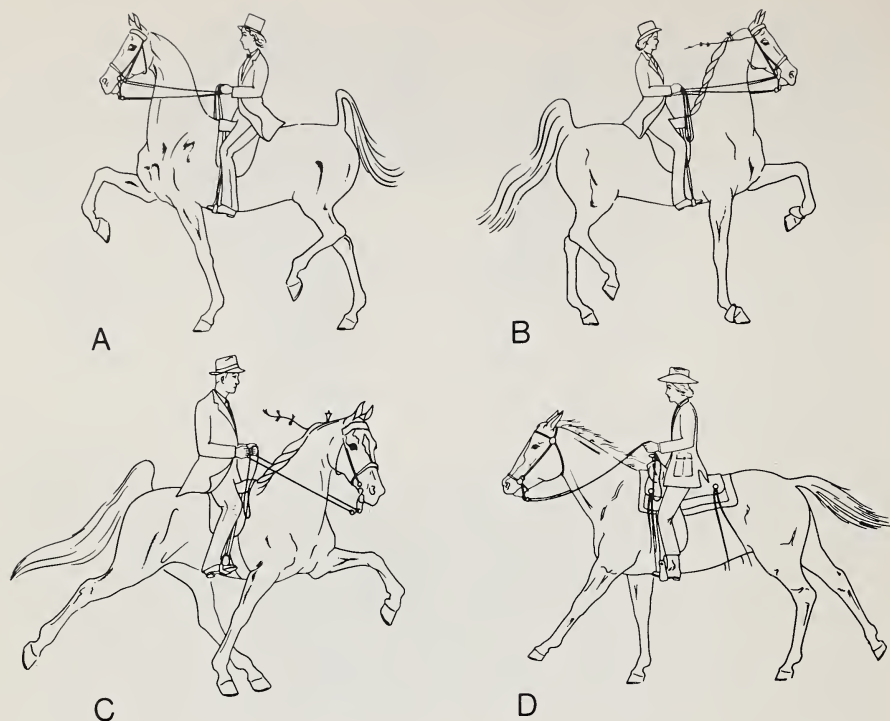
- If your horse is well-mannered, give him 2 to 3 feet of lead so he can keep his head, neck, and body

in a straight line as he moves forward. But keep the lead taut so you have continuous contact with your horse. Do not look back.

- Walk your horse forward briskly in a straight line for 50 to 100 feet, as directed by the judge. When you turn around, always turn your horse to the right and away from you and walk around him as he turns. If you turn him toward you, he is more likely to step on you. Make the turn as small and as effortless as possible.

- Lift your knees a little higher when you are exhibiting your horse than you do ordinarily.

- After you walk your horse the required distance and return, you then trot him the required dis-



BN-37797

The correct show seat and riding attire for (A), a three-gaited horse; (B), a five-gaited horse; and (C), a running walk. In (D), the correct seat and riding attire are shown for western riding.

tance and return, usually about 100 feet. To save time, the judge may have you walk your horse going and trot him coming back. Follow the same procedure at the trot that you did at the walk, except bring your horse to a walk and move him slightly toward you before making the turn.

- After the trot, stand your horse in the proper pose in front of the judge. When the judge has finished his inspection, move your horse to the location in the line indicated by the judge.

- Keep your horse posed at all times and watch the judge closely for instructions.

- When the judge signals you to move to another position, back your horse out of line or if you have room, turn him to the rear of the line and approach the new position from behind.

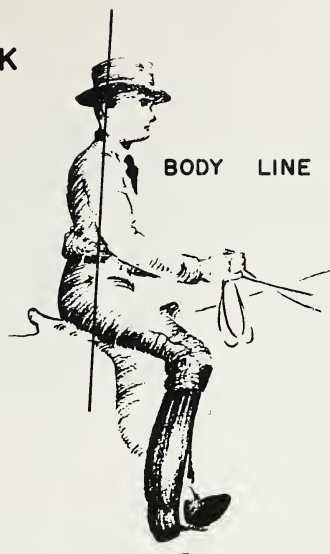
- Try to keep your horse from kicking when he is close to other horses.

- Keep calm at all times. If you get nervous, you will create an unfavorable impression on the judge.

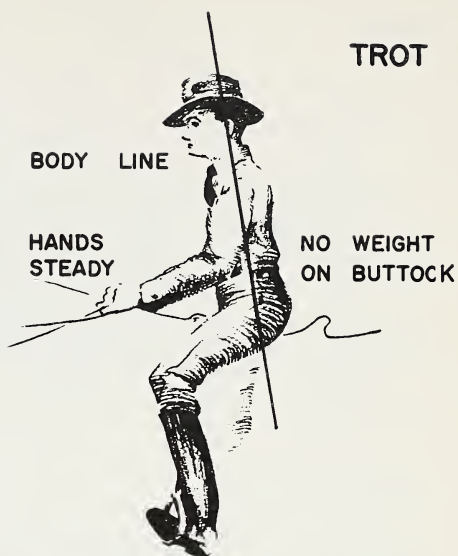
- Work in close partnership with your horse. Train him so he will understand you.

- Be courteous and respect the rights of other exhibitors.

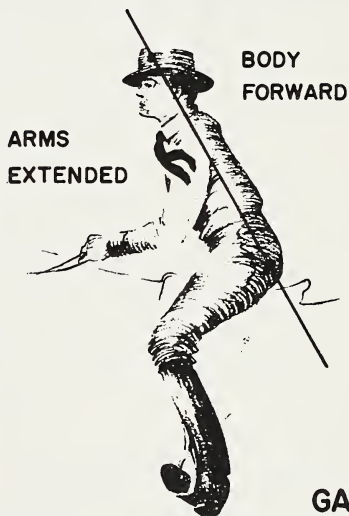
WALK



TROT



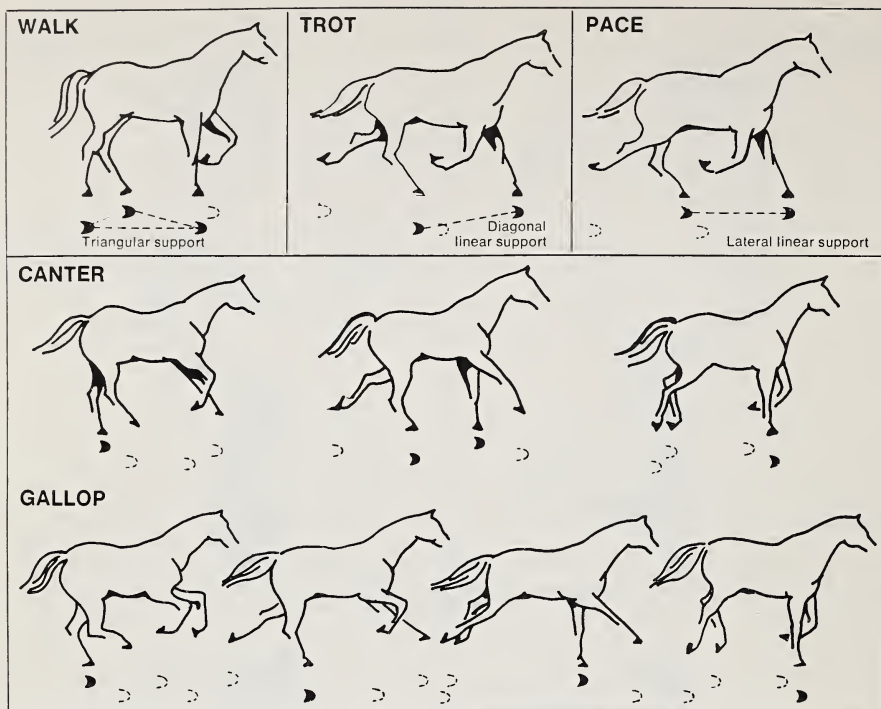
CANTER



GALLOP

BN-37809

The correct riding seat for hunting and jumping. Note the different positions for the walk, trot, canter, and gallop; the proper seat for all gaits requires the head to be erect, the heels down, the weight uniformly balanced, the back concave, and the knees and thighs gripping the saddle.



The gaits of horses.

BN-37799

- Never stand between the judge and your horse.
- Be a good sport. Win without bragging and lose without complaining.

BUILDINGS AND FENCES

Buildings and fences for horses should be adequate but need not be elaborate. Feeding and watering equipment should be provided in each horse stall.

A horse barn should—

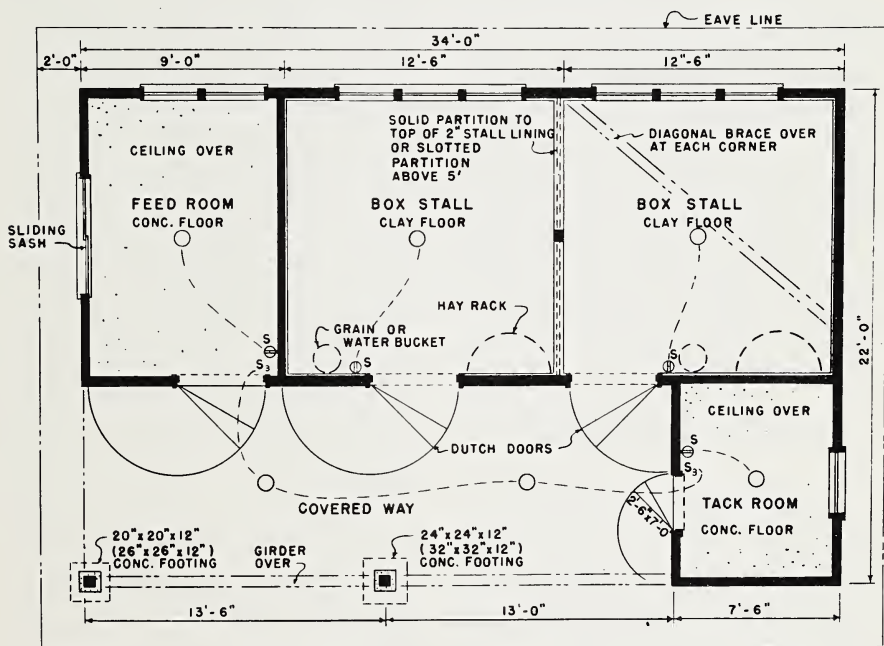
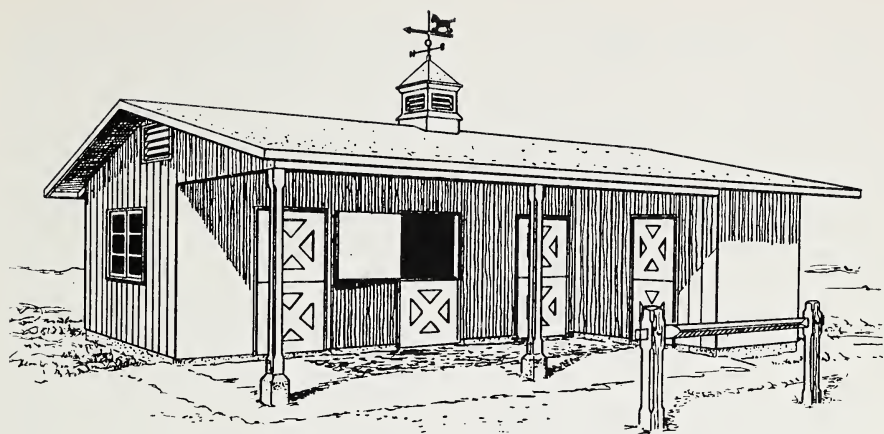
- Protect the horse from rain, snow, sun, and wind.
- Be well ventilated.
- Be warm in winter and cool in summer.

- Have storage space for feed, bedding, and tack.
- Be located so rain water will drain away from the barn.
- Have a dry floor and plenty of clean bedding in each stall.

Select bedding material by availability and price, absorptive capacity, and potential value as a fertilizer. Bedding should not be dusty, too coarse, or too easily kicked aside.

Cereal grain straw or wood shavings generally make the best bedding. A minimum daily allowance is 10 to 15 pounds per animal.

One or two riding horses can be stabled in a barn with other animals if a separate horse barn



BN-5964, BN-5965

Horse barn above and floor plan below. The barn has two box stalls, a feed room, and a tack room.

is not practical. Prefabricated horse barns are available or you can buy materials and build your own.

A horse barn design is shown

on this page. For working drawings of this horse barn, ask your county agricultural agent or the extension agricultural engineer at your State agricultural college.

There is usually a small charge. Order Plan No. 5838, Riding Horse Barn.

If working drawings of this plan are not available in your State, write to the U.S. Department of Agriculture, Agricultural Engineering Research Division, Plant Industry Station, Beltsville, Md. 20785. The U.S. Department of Agriculture does not distribute drawings but will direct you to a State that does distribute them.

A corral, paddock, or pasture should be provided near the horse barn. A large pasture may be fenced with woven wire. If woven wire is used, the mesh should be small enough so the horse cannot get his foot through it. A corral, paddock, or small pasture should be fenced with heavy lumber or heavy metal fencing. Some metal fences in common use are made of steel pipe, aluminum, iron, chain link, or cable.

BREEDING A HORSE

The best time to breed a mare is in the spring. This is the time of year she is most fertile. In the spring, heat cycles are more regular and more evident and the mare is more likely to conceive.

Heat cycles usually recur at 21-day intervals. However, these intervals may be as short as 10 days or as long as 37 days. The actual heat period usually is from 4 to 6 days, but it may range from 1 to 37 days.

Signs that a mare is in heat are relaxation of the external genitals, more frequent urination,

teasing of other mares, restlessness, and an apparent desire for company. There also may be a discharge from the vagina.

If you have a young, shy mare, present her to the teaser stallion fairly often as the breeding season approaches. This will acquaint her with the breeding procedure.

Since actual ovulation probably takes place toward the end of the heat period, you should mate the mare every day or every other day beginning with the third day after she first comes into heat.

Fillies usually start coming into heat when they are 12 to 15 months old. However, most horsemen do not breed fillies until they are 3 years old so they will not foal until they are 4. Broodmares that are properly cared for may produce regularly until they are 25 years old or older.

When you select a mare for breeding, get one that is 3 or 4 years old if possible. If you select an older mare, make certain her breeding habits are regular and normal.

The gestation period of horses is about 336 days, or 11 months. This period may vary as much as 20 to 30 days with individual mares.

The first sign of approaching parturition may be a distended udder 2 to 6 weeks before foaling time. About a week before foaling, the muscular area around the base of the tail usually shrinks and the vulva becomes full and loose.

The teats usually fill out to the ends about 4 to 6 days before

foaling. As parturition draws near, milk may drop from the teats. Do not milk the mare at this time.

If the weather is warm and dry, the ideal place for foaling is in a clean pasture away from other livestock.

If a stall is used, it should be at least 12 feet square; have a smooth, well-packed clay floor; be free of feed containers and other obstructions; and be away from occupied stalls if possible.

As soon as the foal is born, treat its navel cord with tincture of iodine to reduce the danger of navel infection. A strong, healthy foal will be on its feet and ready to nurse in one-half to 2 hours.

Make sure the foal gets the colostrum, or first milk. This milk contains antibodies that protect the foal temporarily against certain infections, and it also serves as a mild laxative.

Always watch the mare closely for any sign of trouble before, during, and after foaling. If you suspect trouble, call a veterinarian at once.

Mares usually come back into heat 7 to 11 days after foaling (foal heat), but the time can range from 3 to 13 days. Some horsemen rebreed mares during this first heat after foaling, usually on the eighth or ninth day, providing the birth was normal and the mare suffered no injury or infection. However, other horsemen prefer to rebreed mares during the heat period that follows the foal heat, which is from 25 to 30 days after foaling.

THE FOAL

After the newborn foal starts breathing and has been rubbed dry, put it in one corner of the stall on clean, fresh straw. The mare usually will be less restless if this corner is in the direction of her head.

Protect the eyes of a newborn foal from bright light.

Treatment of the Navel Cord

If left alone, the navel cord of the newborn foal usually breaks within 2 to 4 inches of the belly. If it does not break, cut it about 2 inches from the belly with clean dull shears or scrape it in two with a knife. A torn or broken blood vessel will bleed very little, but one cut directly across may bleed excessively. Treat the severed cord immediately with tincture of iodine, or other reliable antiseptic; then leave the mare and foal alone so they can rest and gain strength.

Value of Colostrum

Colostrum is milk secreted by the dam for the first few days after parturition. It differs from ordinary milk in that it is more concentrated; is higher in protein content, especially in globulin; is richer in vitamin A; contains antibodies that protect the foal temporarily against certain infections; and is a natural purgative that removes fecal matter accumulated in the digestive tract.

Do not dissipate the benefits of colostrum by "milking out" a mare shortly before foaling time.

The First Nursing

A strong, healthy foal usually will be on its feet and ready to nurse within one-half to 2 hours after birth. Before allowing the foal to nurse for the first time, wash the mare's udder with a mild disinfectant and rinse thoroughly with clean, warm water.

A big, awkward foal occasionally needs assistance when it nurses the first time. If the foal is stubborn, forced feeding will be useless. Back the mare onto additional bedding in one corner of the stall and coax the foal to the teats with a bottle and nipple. An attendant may hold the bottle while standing on the opposite side of the mare from the foal.

A very weak foal should be given the mare's first milk even if it is necessary to draw this milk into a bottle and feed the foal one or two times by nipple. An attendant sometimes must steady a foal before it will nurse.

Bowel Movement

Regulation of the bowel movement of the foal is very important. Constipation and diarrhea (scours) are common ailments.

Excrement impacted in the bowels during prenatal development—material called meconium—may kill the foal if it is not eliminated promptly. A good feed of colostrum usually will cause natural elimination.

Observe the foal's bowel movement 4 to 12 hours after birth. If there has been no fecal dis-

charge by this time, and the foal seems sluggish and fails to nurse, give it an enema. Use 1 to 2 quarts of water at body heat (101° F.) mixed with a little glycerin, or use 1 to 2 quarts of warm, soapy water. Inject the solution with a baby syringe that has about a 3-inch nipple, or use a tube and can. Repeat the treatment until normal yellow feces appear.

If the foal is scouring, reduce the mare's feed and take away part of her milk from the foal at intervals by milking her out.

Diarrhea or scours in foals may result from infectious diseases or dirty surroundings. It is caused by an irritant in the digestive tract that should be removed. Give an astringent only in exceptional cases and on the advice of a veterinarian.

Conditions that may cause diarrhea are contaminated udder or teats, nonremoval of fecal matter from the digestive tract, fretfulness or temperature above normal in the mare, too much feed affecting the quality of the mare's milk, a cold damp bed, or continued exposure to cold rains.

Care of the Suckling Foal

Weather conditions permitting, there is no better place for a mare and foal than on pasture. When the foal is from 10 days to 3 weeks old, it will begin to nibble on a little grain and hay. To promote thrift and early development, and to avoid any setback at weaning time, encourage the foal to eat

supplementary feed as early as possible. The foal should be provided with a low-built grain box especially for this purpose, or if on pasture, the foal may be creep fed.

Rolled oats and wheat bran to which a little brown sugar has been added is especially palatable as a starting ration. Crushed or ground oats, cracked or ground corn, wheat bran, and a little linseed meal may be provided later with good results. Or a good commercial ration may be fed if desired.

Give the foal good hay, preferably a legume, or pasture in addition to its grain ration. A normal, healthy foal should be eating one-half pound of grain daily per 100 pounds of body weight at 4 to 5 weeks of age. This ration should be increased by weaning time to about three-fourths of a pound or more per 100 pounds of body weight. The exact amount of the ration varies with the individual, the type of feed, and the development desired.

Foals normally reach one-half of their mature weight during the first year under such a system. Most breeders of Thoroughbreds and Standardbreds plan to have their 2-year-old animals at full height. Such results require liberal feeding from the beginning. A foal stunted in the first year by insufficient feeding cannot be developed properly later in life. It is well recognized that forced development must be done expertly if the animals are to remain durable and sound.

Training the Foal

If the foal is trained early, it will be a better disciplined, more serviceable horse. Give the foal its lessons one at a time and in proper sequence; that is, be sure the pupil masters one lesson before it is given the next one.

Put a well-fitted halter on the foal when it is 10 to 14 days old. When the foal has become accustomed to the halter, in a day or so, tie the animal securely in the stall beside the mare. Try to keep the foal from freeing itself from the rope or from becoming tangled up in it.

Leave the foal tied 30 to 60 minutes each day for 2 or 3 days. Groom the animal carefully while it is tied. Rub each leg and handle each foot so that the foal becomes accustomed to having its feet picked up. After the foal has been groomed, lead it around with the mare for a few days and then lead it by itself. Lead it at both the walk and the trot. Many breeders of Thoroughbreds teach a foal to lead simply by leading it with the mare from the stall to the paddock and back again.

At this stage of the training, be sure the foal executes your commands to stop and go as soon as you give them. When halted, make the foal stand in show position—squarely on all four legs with its head up.

Use all your patience, gentleness, and firmness in training the foal. Never let your temper get the best of you.

Weaning

Foals usually are weaned at 4 to 6 months of age. Thorough preparation facilitates weaning.

It may be advisable to wean the foal at a comparatively early age if either the foal or mare is not doing well, if the mare is being given heavy work, or if the mare was rebred on the ninth day after foaling.

If by using a creep or a separate grain box the foal has become accustomed to eating a considerable amount of hay and about three-fourths of a pound of grain daily per 100 pounds of body weight, weaning will cause only a slight disturbance or setback. If the ration of the dam is cut in half a few days before the separation, her milk production usually will dry up without difficulty.

Move the mare to new quarters from the stall she shares with the foal. Remove anything in the stall on which the foal might hurt itself during the first unhappy days that it lives alone. Make the separation of the foal from the mare complete and final. If the foal sees, hears, or smells its dam again, the separation process must be started all over again.

Decrease the mare's ration before and during weaning. Rub camphorated oil or a mixture of lard and spirits of camphor on the udder, but do not milk out the udder until 5 to 7 days later when it is soft and flabby.

Turn the foal out on pasture after a day or two. If there are several weanlings together, some of them might get hurt while

running and frolicking in the pasture. Guard against this by first turning out two or three less valuable individuals and letting them tire themselves; then turn out the rest.

At this stage, if numerous weanlings are involved, separate them by sexes. Put the more timid ones by themselves. Do not run weanlings with older horses.

Castration

Geldings, or castrated males, are safer and easier to handle than stallions. Therefore, a colt should be castrated unless it is to be saved for breeding purposes. Have a veterinarian perform this operation. A colt may be castrated when only a few days old, but most horsemen prefer to delay the operation until the animal is about a year old. While there is less real danger to the animal and much less setback with early altering, it results in imperfect development of the foreparts. Delaying castration for a time results in more muscular, bolder features and better carriage of the foreparts.

A colt should be altered when the weather is fair and cool. Otherwise, the time of altering should be determined by the development of the colt. Underdeveloped colts may be left uncastrated 6 months or even a year longer than overdeveloped ones.

Breeders of Thoroughbred horses usually prefer to race them first as uncastrated animals.

There is less danger of infection if colts are castrated in the spring soon after they are turned out on clean pasture and before hot weather and "fly time" arrive. This is extremely important in the Southern States because of the danger of screwworm infestation.

Breaking

A foal will not need breaking if it has been trained properly. When a young horse can be saddled or harnessed with satisfactory ease, it is because the suggested training program has been followed. Saddling and harnessing are just additional steps. A good time to harness and work the horse for the first time is during the winter as a coming 2-year-old.

Raising the Orphan Foal

Occasionally, a mare dies during or immediately after parturition, leaving an orphan foal to be raised. At other times, a mare may fail to give sufficient milk, or she may have twins. In such cases, the foal may be (1) shifted to another mare, known as a foster mother or nurse mare, (2) placed on mare's milk replacer, or synthetic milk, that is mixed and fed according to the manufacturer's directions, or (3) placed on a cow's milk formula.

The following cow's milk formula may be used for feeding the orphan foal when a substitute milk must be used.

1 pint of low-fat cow's milk

4 ounces of lime water

1 teaspoon of sugar

Two teaspoons of lactose or corn syrup may be used to replace the sugar and one large can of evaporated cow's milk may be used with one can of water to replace the fresh milk. The foal should be fed about one-half pint every hour; large foals may be fed slightly more than a pint. After 4 or 5 days increase the interval to 2 hours. After a week, feed every 4 hours and increase the quantity accordingly.

It is important, however, that the orphan foal receive colostrum, preferably for about the first 4 days of life. For this purpose, colostrum from a mare that produces excess milk or one that has lost her foal should be collected and frozen from time to time; then, as needed, it may be thawed and warmed to 100° to 105° F. and fed.

For the first few days, the orphan foal should be fed with a bottle and rubber nipple. Within about 2 weeks, it may be taught to drink from a pail. All receptacles must be kept sanitary (clean and scald each time they are used) and feeding must be at regular intervals. Dry feeding should be started at the earliest possible time with the orphan foal.

FEEDING A HORSE

Feeding practices vary from one locality to another and among horsemen. But the nature of horses remains the same. For this reason, successful feeding in one

stable is not much different from successful feeding in another stable.

Home-Mixed Feeds

When home-mixed feeds are used, feeds of similar nutritive value can be interchanged in the ration as prices go up or down. This makes it possible to get a balanced ration at lowest cost. Some of these feeds are grains such as oats, corn, or barley; protein supplements such as linseed meal, soybean meal, or cottonseed meal; and hay of many kinds.

More than one kind of hay provides variety and appetite appeal. In season, any good pasture can replace part or all of the hay unless work or training conditions make substitution impractical.

In selecting feeds, compare home-mixed feeds with commercial feeds. If you use small quantities or have little room for storage, you may find it more satisfactory to buy ready-mixed feeds.

Nutritional deficiencies, especially deficiencies of certain vitamins and minerals, may not be of sufficient proportions to cause clear-cut deficiency symptoms. Yet, such deficiencies without outward signs may cause great economic losses because they go unnoticed and uncorrected. Accordingly, sufficient additives should always be present, but care should be taken to avoid imbalances.

During winter months, add a few sliced carrots to the ration, an occasional bran mash, or a small amount of linseed meal. Also, use bran mash or linseed meal to regulate the bowels.

The proportion of concentrates must be increased and the roughages decreased as energy needs rise with the greater amount of work. A horse that works at a trot needs considerably more feed than one that works at a walk. For this reason, riding horses in medium to light use require somewhat less grain and more hay in proportion to body weight than horses that are racing. Several suggested rations are given in the chart on pages 35 to 37.

The quantities of feeds recommended in the chart are intended as guides only. Increase the feed, especially the concentrates, when the horse is too thin and decrease the feed if he gets too fat.

Avoid sudden changes in diet, especially when changing from a less concentrated ration to a more concentrated one. When this rule of feeding is ignored, digestive disturbances result and the horse goes "off feed." In either adding or omitting one or more ingredients, the change should be made gradually. Likewise, caution should be exercised in turning horses to pasture or in transferring them to more lush grazing.

In general, horses may be given as much nonlegume roughage as they will eat. But they must be accustomed gradually to legumes because legumes may be laxative.

Light-horse feeding guide

Age, sex, and use	Daily allowance	Kind of hay	Suggested grain rations		
			Rations No. 1	Rations No. 2	Rations No. 3
Stallions in breeding season (weighing 900 to 1,400 lb.).	$\frac{3}{4}$ to $1\frac{1}{2}$ lb. grain per 100 lb. body weight, together with a quantity of hay within same range.	Grass-legume mixed; or $\frac{1}{3}$ to $\frac{1}{2}$ legume hay, with remainder grass hay.	<i>Pounds</i> Oats-----55 Wheat-----20 Wheat bran-----20 Linseed meal-- 5	<i>Pounds</i> Corn-----35 Oats-----35 Wheat-----15 Wheat bran-----15	<i>Pounds</i> Oats-----100
Pregnant mares (weighing 900 to 1,400 lb.).	$\frac{1}{2}$ to $1\frac{1}{2}$ lb. grain per 100 lb. body weight, together with a quantity of hay within same range.	Grass-legume mixed; or $\frac{1}{3}$ to $\frac{1}{2}$ legume hay, with remainder grass hay (straight grass hay may be used first half of pregnancy).	Oats-----80 Wheat bran-----20	Barley-----45 Oats-----45 Wheat bran-----10	Oats----- 95 Linseed meal-- 5
Foals before weaning (weighing 100 to 350 lb. with projected mature weights of 900 to 1,400 lb.).	$\frac{1}{2}$ to $\frac{3}{4}$ lb. grain per 100 lb. body weight, together with a quantity of hay within same range.	Legume hay.	Oats-----50 Wheat bran-----40 Linseed meal--10	Oats-----30 Barley-----30 Wheat bran-----30 Linseed meal--10	Oats----- 80 Wheat bran----- 20

Rations balanced on basis of following assumption: Mares of mature weights of 600, 800, 1,000, and 1,200 lb. may produce 36, 42, 44, and 49 lb. of milk daily.

Light-horse feeding guide—Continued

Age, sex, and use	Daily allowance	Kind of hay	Suggested grain rations		
			Rations No. 1	Rations No. 2	Rations No. 3
Weanlings (weighing 350 to 450 lb.).	1 to 1½ lb. grain and 1½ to 2 lb. hay per 100 lb. body weight.	Grass-legume mixed; or ½ legume hay, with remainder grass hay.	Oats-----30 Barley-----30 Wheat bran-----30 Linseed meal--10	Oats-----70 Wheat bran-----15 Linseed meal--15	Oats-----80 Linseed meal--20
Yearlings, 2nd summer (weighing 450 to 700 lb.).	Good, luxuriant pastures (if in training or for other reasons without access to pastures, the ration should be intermediate between the adjacent upper and lower groups).				
Yearlings, or rising 2-year-olds, 2nd winter (weighing 700 to 1,000 lb.).	½ to 1 lb. grain and 1½ lb. hay per 100 lb. body weight.	Grass-legume mixed; or ⅓ to ½ legume hay, with remainder grass hay.	Oats-----80 Wheat bran-----20	Barley-----35 Oats-----35 Bran-----15 Linseed meal--15	Oats-----100

Light horses at work; riding, driving, and racing (weighing 900 to 1,400 lb.).	Hard use— $1\frac{1}{4}$ to $1\frac{1}{2}$ lb. grain and 1 to $1\frac{1}{4}$ lb. hay per 100 lb. body weight. Medium use— $\frac{3}{4}$ to 1 lb. grain and 1 to $1\frac{1}{4}$ lb. hay per 100 lb. body weight. Light use— $\frac{2}{5}$ to $\frac{1}{2}$ lb. grain and $1\frac{1}{4}$ to $1\frac{1}{2}$ lb. hay per 100 lb. body weight.	Grass hay.	Oats.....100	Oats.....70 Corn.....30	Oats.....70 Barley.....30
Mature idle horses; stallions, mares, and geldings (weighing 900 to 1,400 lb.).	$1\frac{1}{2}$ to $1\frac{3}{4}$ lb. hay per 100 lb. body weight.	Pasture in season; or grass-legume mixed hay.	(With grass hay, add $\frac{3}{4}$ lb. of a high protein supplement daily).		

Note: With all rations and for all classes and ages of horses, provide free access to separate containers of (1) iodized salt and (2) a mixture of 1 part salt and 2 parts steamed bone meal or other suitable calcium-phosphorous supplement.

The grain ration usually is divided into three equal feedings at morning, noon, and night. Because hay distends the digestive tract, feed most of the hay at night. A common practice is to feed one-fourth of the hay at each of the morning and noon feedings and the remaining one-half at night when the horse has plenty of time to eat leisurely.

Pelleted Feeds

Pelleted horse feeds may be made from concentrates alone, forage alone, or concentrates and forage combined in a complete ration. All-pelleted feeds with the hay and grain combined in each pellet have several advantages: (1) They take less storage space than hay and are easier to store and handle; (2) each pellet is a balanced feed; (3) horses waste practically no feed when they eat pellets; and (4) pellet-fed horses are trimmer in the middle because they eat less bulk.

One-half-inch pellets are better for mature horses, and one-fourth-inch pellets for weanlings and yearlings. Very hard pellets should be avoided because horses will not eat them if they cannot chew them.

Because there is little waste, you can give horses less all-pelleted feed than conventional feed. For a horse at light work, feed 1.4 to 1.8 pounds of pelleted feed daily per 100 pounds of body weight. Use a feed that contains 53 to 56 percent total digestible nutrient (TDN). Increase the

feed allowance with the severity of the work.

As with any change in feed, switch to an all-pelleted feed gradually. Otherwise, the horse may develop such vices as wood chewing or bolting (eating too rapidly). At first, continue to offer all the long hay the horse wants, and slowly replace the grain portion of the conventional feed with the complete pelleted feed. Increase the pelleted feed about 1 to 2 pounds a day and gradually lessen the hay. After a few days, the horse usually will stop eating the hay and eat only the pelleted feed.

Minerals and Vitamins

The classical horse ration of grass, grass hay, and farm grains usually is deficient in calcium but adequate in phosphorus. Also, salt is almost always deficient; and many horse rations do not contain sufficient iodine. Thus, horses usually need special mineral supplements.

On the average, a horse needs about 3 ounces of salt daily or $1\frac{1}{3}$ pounds per week, although salt requirements vary with work and temperature. Use iodized salt in iodine-deficient areas.

The salt requirements, and any calcium or phosphorus requirements not met by feeds, can best be supplied by allowing free access to a two-compartment box containing minerals. One compartment should have iodized salt and the other should contain a suitable mineral mixture.

Certain vitamins are necessary to the growth, health, and reproduction of horses. Sometimes, vitamins A and D are deficient in feeds. Indications are that horses also need vitamin E and two of the B vitamins, riboflavin and thiamine.

High-quality, leafy, green forage and plenty of sunlight generally give horses most of the vitamins they need. Horses get vitamin A and riboflavin from green pasture and green hay not over a year old; they get vitamin D from sunlight and sun-cured hay. If plenty of sunlight and green forage are not available, get the advice of a veterinarian or nutritionist on the use of vitamin additives in the feed.

Water

Horses should have plenty of clean, fresh, cool water. They will drink 10 to 12 gallons daily; the amount depends on weather, amount of work done, rations fed, and the size of the horse.

Free access to water is best. When this is not possible, horses should be watered at approximately the same times each day. Water may be given before, during, or after feeding.

Frequent, small waterings between feedings are best during warm weather, or when the animal is working hard. Do not allow a horse to drink heavily when he is hot, because he may founder. Do not allow a horse to drink large quantities of water just before he is put to work.

Pasture

Good pastures are hard to provide for horses, especially in suburban areas. A temporary pasture grown in a regular crop rotation usually is better than a permanent pasture because a permanent pasture may become parasite infested.

The specific grass or grass-legume mixture used in pastures will vary from area to area according to differences in soil, temperature, and rainfall. Ask your county agricultural agent or a specialist at your State agricultural college to recommend pasture grasses for the area in which you live.

GROOMING A HORSE

Proper grooming cleans the hair, keeps the skin in good condition, and helps prevent skin diseases and parasites. Routine grooming usually consists of cleaning and brushing the hair with a brush, comb, and grooming cloth.

Grooming should be rapid and vigorous but not so rough that it hurts the horse or upsets him.

Horses that are kept in stables or small corrals should be groomed thoroughly at least once daily. Those that are worked or exercised should be groomed immediately before and after the work or exercise.

CARE OF THE FEET

The value of a horse lies chiefly in his ability to move; therefore, good feet and legs are necessary.

The important points in the care of a horse's feet are to keep them clean, prevent them from drying out, trim them so they retain proper shape and length, and shoe them correctly when shoes are needed.

Each day, clean the feet of horses that are shod, stabled, or worked. Use a hoof pick for cleaning. Work from the heel toward the toe. Be sure to clean out the depressions in the underside of the feet. While you are cleaning the feet, inspect for loose shoes and thrush.

Thrush is a disease of the foot characterized by a pungent odor. It causes a deterioration of tissues in the cleft of the frog or in the junction between the frog and bars. This disease produces lameness and, if not treated, can be serious.

Before trimming or shoeing a horse's feet, you should be able to recognize proper and faulty conformation. The diagram on this page shows the proper posture of the hoof and incorrect postures

caused by hoofs that have grown too long either at the toe or heel.

The slope is considered normal when the toe of the hoof and the pastern have the same direction. Keep this angle in mind and change it only as a corrective measure. If you should need to correct uneven wear of the hoof, correct it gradually over a period of several trimmings.

Trim the hoofs every month or 6 weeks whether the animal is shod or not. Before trimming the feet, inspect them while the horse is standing squarely on a level, hard surface and again while he is at the walk and the trot. If shoes are left on too long, the hoofs grow out of proportion. This may throw the horse off balance and put extra stress on the tendons.

Always keep the hoofs at the proper length and in the correct posture. Trim them near the level of the sole; otherwise, they will split off if the horse remains unshod. Trim the frog carefully and remove only ragged edges that



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Proper and faulty hoof posture. *Left*, properly trimmed hoof with normal foot axis: O, coffin bone; X, short pastern bone; Y, long pastern bone; Z, cannon bone. *Center*, toe too long, which breaks the foot axis backward; horizontal dotted line shows how hoof should be trimmed to restore normal posture. *Right*, heel too long, which breaks the foot axis forward; horizontal dotted line shows how trimming will restore the correct posture.

allow filth to accumulate in the crevices. Trim the sole sparingly, if at all, and never rasp the wall of the hoof.

The following list gives some faults that are commonly found in a horse's hoofs and how to correct them with proper trimming.

Splayfoot.—Trim the outer half of the foot.

Pigeon toed.—Trim the inner half of the foot more heavily than the outer half.

Quarter crack.—Keep the hoof moist. Shorten the toe and use a corrective shoe.

Cocked ankles.—Lower the heels.

Contracted heels.—Lower the heels and allow the frog to carry more of the weight; this spreads the heels apart.

Horses should be shod when they are to be used on hard surfaces for any length of time. Also, shoes may be used to change gaits, aid in gripping the ground, correct faulty hoof structure or growth, and protect the hoof from such conditions as corns, contraction, or cracks.

Make sure the shoes are made to fit the horses foot, not the reverse. Reshoe or reset the shoes every 4 to 6 weeks. *Do not* attempt to shoe a horse without first getting sufficient instruction from a farrier.

Hoofs may become dry and brittle; sometimes they split and cause lameness. The frog loses its elasticity and no longer is effective as a shock absorber. If the

dryness is prolonged, the frog shrinks and the heel contracts.

Dry hoofs usually can be prevented by applying a hoof dressing, attaching wet burlap sacks around the hoofs, or keeping the ground wet around the watering tank.

Horses develop sound feet and legs from outdoor exercise. Let them exercise on pastures when possible. If no pasture is available, ride or drive them for an hour or so a day.

Horses with bad feet frequently cannot exercise on roads. Those with faulty tendons may not be able to exercise under saddle. Allow such animals to exercise by longeing on a line 30 to 40 feet long, by leading, or by going loose in a large paddock or pasture.

DISEASES AND PARASITES

The information given here is presented merely to acquaint the reader with the more common diseases and parasites of the horse and is not intended to be used in lieu of the services of a veterinarian. Always call your veterinarian if your horse should become sick or lame.

You can help protect the health of your animals with strict sanitation and disease prevention programs. Although exact programs will differ, basic principles remain the same.

When you see symptoms of infectious disease, promptly isolate all affected animals and provide them with separate water and feed containers. Always avoid

public feeding and watering facilities if possible.

You can help prevent or control parasites by adhering to the following practices.

- Provide good sanitation and proper nutrition.

- Use temporary seeded pasture rather than permanent pasture, and practice rotation grazing.

- Pasture young stock on clean pastures. Never allow young horses to graze on an infested area unless the area has either been plowed or left idle for a year.

- Do not spread fresh horse manure on pastures grazed by horses. Store the manure in a suitable pit for at least 2 weeks or spread it on fields that are to be plowed and cropped.

- When small fields or paddocks must be used, pick up the droppings at frequent intervals.

- Keep pastures mowed and harrowed; use a chain harrow.

- Prevent fecal contamination of feed and water.

- Have a veterinarian treat animals that have internal or external parasites. After animals are treated for internal parasites, move them to a clean area.

- If cattle are on the premises, alternate the use of pastures between cattle and horses because most parasites are not transferrable between species.

- Avoid overgrazing; there are more parasites on the bottom inch of the grass.

Some of the diseases and parasites that attack horses are discussed in the following sections.

Symptoms and measures for prevention and control are shown for each ailment.

Diseases

Anthrax (splenic fever).—

Caused by bacteria. Animals are feverish and excitable and later become depressed. The head hangs low and respiration is rapid. Swellings appear over the body, especially around the neck region. There may be a bloody discharge from all body openings.

Isolate all sick animals. All carcasses and contaminated material should be burned or buried deeply and covered with quicklime. Have all exposed, but healthy, animals vaccinated; rotate pastures and initiate a rigid sanitation program.

In infected areas, vaccination under the supervision of a veterinarian should be repeated each year, usually in the spring. Ask a veterinarian to recommend measures for the control of flies.

Distemper (strangles).—Caused by bacteria. Animals lose appetite, have a high fever, and discharge pus from the nose. By the third or fourth day of the disease, the glands under the jaw enlarge, become sore, and eventually break open and discharge pus. A cough usually is present.

Isolate sick animals. Clean and disinfect contaminated areas. Do not allow healthy animals to come in contact with infected animals or with contaminated feeds, premises, or equipment.

Have animals vaccinated to help prevent the disease.

VEE

An outbreak of Venezuelan Equine Encephalomyelitis (VEE) was reported in Texas in 1971. This was the first time the disease had occurred in the United States.

VEE is an infectious virus disease of the central nervous system of horses, causing mortality as high as 80 to 90 percent. The disease also may attack humans. The symptoms of VEE in horses are similar to those in the common eastern and western types of encephalomyelitis. In humans the infection usually produces a mild to severe respiratory illness with severe frontal headache and high fever. Children usually are affected more severely than adults. VEE is generally not fatal in humans but some deaths have been reported.

VEE was first diagnosed in Venezuela in 1936 and was reported in several South and Central American countries before the outbreak occurred in the United States.

VEE is transmitted by mosquitoes and other insects. There is also a possibility of contact transmission between horses. Rodents are susceptible to VEE and they may be reservoirs of the virus in the natural spread of the disease.

The program to control the 1971 outbreak of VEE included spraying to control mosquitoes and the vaccination of horses.

Encephalomyelitis (sleeping sickness).—Caused by four different viruses that are transmitted by mosquitoes. Two types are common in the United States—eastern type and western type.

In early stages, a sick animal walks around aimlessly, crashing into objects. Later he may appear sleepy, grind his teeth, be unable to swallow, have paralyzed lips, and be blind. Paralysis may cause the animal to fall.

Burn or bury all infected carcasses; destroy, if possible, insect breeding grounds; and do not move animals from an infected area to a clean one. Have animals vaccinated each year before May or as soon as the disease makes its appearance in a community.

Equine abortion.—Causes of abortion may be grouped as (1) *Salmonella abortus equina*; (2) streptococcal abortion; (3) virus, or epizootic abortion (rhinopneumonitis); (4) viral arteritis, caused by a virus; and (5) miscellaneous, with causes such as accidents, faulty feeds, or twins.

Salmonella abortus equina abortions occur most frequently in last half of pregnancy.

Streptococcal abortion usually occurs early in pregnancy, prior to the fifth month.

Virus, or epizootic, abortion generally occurs late in pregnancy, after the fifth month. Some foals are born alive and die at 2 to 3 days of age.

Viral arteritis causes fever, inflammation of the respiratory tract, and swelling of the eyelids and legs. One-half or more of

pregnant mares that are infected may abort.

Quarantine animals that have aborted. Burn or bury the bedding and fetus. Disinfect contaminated premises. Isolate animals newly introduced to the premises.

Prevent abortion caused by *Salmonella abortus equina* by vaccinating all pregnant mares every year where premises are infected with the organism.

Prevent streptococcic abortion by making sure you mate only healthy animals and observe scrupulous cleanliness at mating.

Prevent virus, or epizootic, abortion by vaccinating all horses of both sexes and all ages twice annually, in July and October.

Prevent viral arteritis by isolating new horses on the premises and quarantining infected horses.

Equine infectious enemia (swamp fever).—Caused by a virus that may be transmitted by stableflies.

Symptoms vary but they usually include some of the following: High and intermittent fever, stiffness and weakness, anemia, jaundice, swelling of the lower body and legs, and loss of weight even though the appetite remains good. Most infected animals die within 2 to 4 weeks.

Isolate infected animals. Burn or bury all carcasses. Separate feeding and watering equipment from that used by healthy animals. Practice good sanitation and reduce the number of biting insects as much as possible. There is no known preventive vaccination.

Infected horses may be virus

carriers for years and transmit the disease to other horses.

Equine influenza.—Caused by a virus. Symptoms develop 2 to 10 days after exposure.

The disease is marked by rapidly rising temperature, which may reach 106° F. and persist for 2 to 10 days. Other symptoms include loss of appetite, extreme weakness, rapid breathing, a dry cough, and a watery discharge from the eyes and nostrils followed by a white to yellow nasal discharge. Young animals are particularly susceptible to this disease.

Do not allow sick animals to exercise when the temperature is high. Isolate sick animals to avoid transmission of the virus.

Have animals vaccinated to lessen the possibility of infection.

Tetanus (lockjaw).—Caused by bacteria that usually gain entrance to the body through a wound.

The first sign of tetanus is a stiffness about the head. The animal often chews slowly and weakly and swallows awkwardly. The third, or inner, eyelid protrudes over the forward surface of the eyeball. When the animal sees the slightest movement or hears the slightest noise, he has violent spasms. He usually remains standing until near death. Death occurs in over half of the cases.

Place a sick animal in the care of a veterinarian and keep the animal quiet. Make the animal as comfortable as possible and provide it with plenty of water and soft feed.

Have animals vaccinated as a preventive measure.

Vesicular stomatitis.—Caused by a virus. Blisters and raw spots appear on the tongue, the inner surfaces of the lips, the angles of the mouth, and the gums. There is considerable salivation.

Make the animal as comfortable as possible and provide plenty of water and soft feed.

There is no vaccination.

Internal Parasites

Ascarids (white worm, large roundworm).—The female is from 6 to 22 inches long and the male from 5 to 13 inches. When full grown, both are about the diameter of a lead pencil.

The injury caused by ascarids varies from little damage to heavy infections that may cause death. Death usually is due to a ruptured intestine. Serious lung damage caused by migrating ascarid larvae may result in pneumonia. More common are retarded growth, a potbelly, rough hair coat, and digestive disturbances.

Ascarids especially affect young animals but rarely attack horses more than 5 years old.

Keep the barn and paddocks clean, store manure in a pit 2 to 3 weeks before spreading it, provide clean feed and water, and place young foals on clean pasture.

Ask a veterinarian to prescribe a worming medicine and treatment schedule.

Bots.—These are the larvae of botflies. Infected animals have frequent digestive upsets and even colic, lowered vitality, emaciation,

and reduced work output. Bots may cause death.

Botflies lay their eggs in the hair of horses, usually on the front legs and shoulders. The flies cause animals to toss their heads in the air, strike the ground with their front feet, and rub their noses on their legs or any other convenient object.

Frequent grooming, washing, and clipping will help prevent infestations of bots. Fly nets and nose covers offer some relief from the attacks of botflies.

In late fall, at least 1 month after the first killing frost, have infected animals treated with a vermifuge. Thirty days before the vermifuge is given, destroy any botfly eggs clinging to the body by washing animals in water heated to 120° F. or by clipping the hair.

Prevention is best assured by community campaigns in which all horses in the area are treated.

Equine piroplasmiasis (babesiosis).—Caused by protozoan parasites that invade the red blood cells.

The symptoms are similar to infectious anemia, or swamp fever. A positive diagnosis can be made if protozoa are present in the red blood cells.

Sick animals have a fever of 103° to 106° F., anemia, jaundice, thirst, swelling of the eyelids, constipation, and colic. The urine is yellow to a reddish color.

See a veterinarian immediately; many States have laws that require you to report this infection.

Between 10 to 15 percent of sick animals die. Recovered ani-

mals remain carriers for 10 months to 4 years and should be isolated.

Intestinal threadworms (strongyloides).—The symptoms are diarrhea, stunted growth, and unthriftiness in foals. The worms disappear by the time foals are 6 months old.

Good sanitation and clean, dry bedding are the best prevention. Ask a veterinarian for advice on treatment of heavily infected animals.

Pinworms (rectal worms).—Two kinds frequently are found in horses. Those of one kind are whitish with long, slender tails and those of the other kind are so small they are barely visible.

Symptoms are irritation of the anus and tail rubbing. Heavy infections also may cause digestive disturbances and produce anemia. Large pinworms cause the most damage; they may be seen in the feces of heavily infected horses.

The best preventive measures are to practice good sanitation and keep infected animals separated from the excrement.

Stomach worms.—These worms cause inflammation in the stomach.

Infected horses have severe gastritis. Sometimes the larvae of the larger kinds of stomach worms are responsible in part for the skin disease of horses called "summer sores."

Maintain good sanitation, proper manure disposal, and fly control.

Strongyles (bloodworms).—A few kinds grow up to 2 inches long

but most are very small. The large strongyles are variously called bloodworms, palisade worms, sclerostomes, and red worms.

Infected horses have lack of appetite, anemia, progressive emaciation, a rough hair coat, sunken eyes, digestive disturbances, and sometimes posterior paralysis that results in death.

The harmful effects are greatest in young animals. One kind of large strongyle may permanently damage the intestinal blood vessels and cause the death of animals of any age.

Collect manure daily from pastures and barns and store it in a pit 2 to 3 weeks. Rotate pastures, and avoid overstocked and moist pastures.

Tapeworms.—Three kinds of tapeworms attack horses. Heavy infections may cause digestive disturbances, loss of weight, and anemia.

Practice good sanitation by following such practices as rotating pastures, using clean bedding, collecting manure regularly, and avoiding overstocking pastures.

External Parasites

Blowflies.—Blowfly larvae, or maggots, feed on flesh and skin and produce severe irritation. Infested animals rapidly become weak and fevered.

Ask a veterinarian to recommend control measures and prescribe treatment. Destroy dead animals by burning or deep burial.

Houseflies and stableflies.—Houseflies do not bite but they are

a nuisance. Stableflies bite, principally on the legs.

Houseflies transmit one species of roundworm. Stableflies may transmit anthrax and infectious anemia.

Practice good sanitation, collect and dispose of manure, and use screens when practical.

Horseflies, deerflies, and mosquitoes.—These are all biting insects. Bites of horseflies and deerflies are very painful. Mosquitoes transmit encephalomyelitis.

Drainage and landfill are the best methods for preventing mosquitoes. Shelters for horses on pasture provide some protection from horseflies, deerflies, and mosquitoes. Get a veterinarian to prescribe an insecticide.

Face flies.—Face flies gather in large numbers on the faces of horses, especially around the eyes and nose.

Shelters for horses on pasture will afford some protection from face flies. Get a veterinarian to prescribe an insecticide.

Lice.—These small, flattened, wingless parasites cause intense irritation and restlessness. Infested animals may itch severely, which causes them to rub and gnaw the skin. The hair may be rough, thin, and dull looking. Scabs may be present. Lice are apt to be most plentiful around the root of the tail, on the inside of the thighs, over the fetlock region, and along the neck and shoulders.

Lice show up most commonly in winter on ill-nourished and neglected animals. They retard growth, lower work efficiency, and

produce unthriftiness. Get a veterinarian to prescribe a treatment.

Mites.—These very small parasites produce mange. Symptoms are skin irritation, itching, and scratching. The skin becomes thick, tough, and wrinkled and a crust forms over it. The infection appears to spread most rapidly during the winter months and among young and poorly nourished animals.

Mites retard growth, lower work efficiency, and produce unthriftiness. The best prevention is to keep horses away from infested animals or premises. In case of an outbreak, call a veterinarian and quarantine affected animals.

Ringworm.—Caused by microscopic fungi. Round, scaly areas with almost no hair appear mainly in the vicinity of the eyes, ears, side of the neck, or the root of the tail. Usually there is mild itching.

Isolate infected animals. Disinfect everything that has been in contact with the infected animals, including combs and brushes. Practice strict sanitation. Get a veterinarian to prescribe a treatment.

Screwworms.—Screwworm flies raise their maggots in the flesh of animals, especially in wounds. Symptoms are loss of appetite, unthriftiness, and lowered activity.

Keep animals from getting cut or scratched and protect wounds that do appear. In screwworm infested areas, schedule castrations during the winter season when flies are least abundant and active. Get a veterinarian to prescribe a treatment.

Ticks.—Several kinds of ticks attack horses. Symptoms are lowered vitality and itching in the parts that are attacked. Ticks may

spread diseases such as piroplasmosis and African horse fever.

Control ticks the same way you control lice.

BREED REGISTRY ASSOCIATIONS

American Albino Association, Inc.
Box 79
Crabtree, Ore. 97335

American Andalusian Association
P. O. Box 1290
Silver City, New Mexico 88061

American Association of Owners
and Breeders of Peruvian Paso
Horses
P. O. Box 371
Calabasas, Calif. 91302

American Buckskin Registry Association
P. O. Box 1125
Anderson, Calif. 96007

American Connemara Pony Society
R. R. 2, Featherbed Lane
Ballston Spa, New York 12020

American Gotland Horse Association
Route 2, Box 181
Elkland, Mo. 65644

American Hackney Horse Society
527 Madison Avenue
Room 725
New York, N. Y. 10022

American Paint Horse Association
P. O. Box 12487
Fort Worth, Tex. 76116

American Paso Fino Pleasure
Horse Association, Inc.
Arrott Building
401 Wood Street
Pittsburgh, Pa. 15222

American Quarter Horse Association
P. O. Box 200
Amarillo, Tex. 79105

American Remount Association
(Half-Thoroughbred Registry)
20560 Perris Blvd.
Perris, Calif. 92370

American Saddle Horse Breeders
Association
929 South Fourth Street
Louisville, Ky. 40203

American Shetland Pony Club
P. O. Box 2339
West Lafayette, Ind. 47902

Appaloosa Horse Club, Inc.
Box 403
Moscow, Idaho 83843

Arabian Horse Club Registry of
America
One Executive Park
7801 Bellevue Avenue
Englewood, Colo. 80110

Cleveland Bay Society of America
White Post, Va. 22663

- | | |
|---|---|
| Galiceno Horse Breeders Association, Inc.
708 Peoples Bank Building
Tyler, Tex. 75701 | Palomino Horse Association, The
Box 446
Chatsworth, Calif. 91311 |
| Hungarian Horse Association
Bitterroot Stock Farm
Hamilton, Mont. 59840 | Palomino Horse Breeders of America
P. O. Box 249
Mineral Wells, Tex. 76067 |
| International Arabian Horse Association
224 East Olive Avenue
Burbank, Calif. 91503 | Pinto Horse Association of America, Inc.
Box 3984
San Diego, Calif. 92103 |
| International Buckskin Horse Registry
P. O. Box 2194
Redding, California 96001 | Pony of the Americas Club, Inc.
P. O. Box 1447
Mason City, Iowa 50401 |
| Jockey Club, The
(Thoroughbred horses)
300 Park Avenue
New York, N. Y. 10022 | Spanish Mustang Registry, Inc.
Box 398
Thompson Falls, Montana 59873 |
| Missouri Fox Trotting Horse Breed Association, Inc.
P. O. Box 637
Ava, Mo. 65608 | Tennessee Walking Horse Breeders' Association of America
P. O. Box 286
Lewisburg, Tenn. 37091 |
| Morgan Horse Club Inc., The
P. O. Box 2157
West Hartford, Conn. 06117 | United States Trotting Association, The
(Standardbred horses)
750 Michigan Avenue
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| Morocco Spotted Horse Cooperative Association of America
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